Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

1. (Currently Amended) A method of storing values in local variables used by a virtual machine, said method comprising:

receiving a first sequence of bytecodes to be executed by said virtual machine;

selecting, at load time, a first-reduced instruction from a reduced set of virtual machine instructions, wherein said first-reduced instruction represents two or more different virtual machine instructions in said first sequence[[s]] of virtual machine instructions, wherein the virtual machine is compatible with a defined virtual machine specification that includes a defined set of executable virtual machine instructions that must be implemented to conform with the virtual machine specification, the virtual machine being arranged to execute the reduced set of virtual machine instructions that provide substantially all of the functionality provided by the defined virtual machine instruction set, and wherein every one of the instructions in the defined set of executable instructions can be represented by at least one of the virtual machine instructions in the reduced virtual machine instruction set, and wherein the reduced set of virtual machine instructions consists of a number of virtual machine instructions which is less than the number executable virtual machine instructions in the defined virtual machine instruction set;

translating, at load time, said two or more different virtual machine instructions in said first sequence of bytecodes into said first-reduced instruction from said reduced set of virtual machine instructions;

generating, after said translating, a second sequence of bytecodes that includes said first-reduced instruction, thereby representing said first sequence of bytecodes with [[a]] said second sequence which includes at least one instruction from said reduced set of virtual machine instruction instructions that replaces said two or more different virtual machine instructions in said first sequence;

determining, at load time, whether said second sequence of bytcodes includes a Getfield instruction immediately followed by an Astore instruction, wherein said Getfield

and Astore instructions are selected from said reduced set of virtual machine instructions;

      generating, at load time, a macro instruction that represents said Getfield instruction and said Astore instruction that immediately follows said Getfield instruction;

      loading in said virtual machine prior to execution time, said macro instruction instead of said Getfield instruction and said Astore instruction; [[and]]

      executing said macro instruction to store a value into a local variable; and wherein said virtual machine internally represents instructions as a pair of streams.

2. (Cancelled)

3. (Previously presented) A method as recited in claim 1, wherein said Java macro instruction is generated during a bytecode verification phase.

4. (Cancelled)

5. (Currently Amended) A method as recited in claim [[4]] 1,

      wherein said pair of streams includes a code stream and a data stream,

      wherein said code stream is suitable for containing a code portion of said macro instruction, and

      wherein said data stream is suitable for containing data.

6. (Currently Amended) A method Java macro-instruction as recited in claim 5,

      wherein said Java macro instruction is generated only when said virtual machine determines that said Java macro instruction should be generated replace said conventional sequence.

7. (Previously Presented) A method as recited in claim 6, wherein said determination of whether said macro instruction should be generated is made based on a predetermined criteria.

8. (Currently Amended) A method as recited in claim 7, wherein said predetermined criteria is whether [[a]] said Getfield instruction is immediately followed by an said Astore instruction more than a predetermined number of times.

9-20 (Cancelled)

21. (Currently Amended) A computer system for storing values into local variables used by a virtual machine, wherein said computer system operates to is capable of:

receiving a first sequence of bytecodes to be executed by said virtual machine;

selecting, at load time, a first-reduced instruction from a reduced set of virtual machine instructions, wherein said first-reduced instruction represents two or more different virtual machine instructions in said first sequence[[s]] of virtual machine instructions, wherein the virtual machine is compatible with a defined virtual machine specification that includes a defined set of executable virtual machine instructions that must be implemented to conform with the virtual machine specification, the virtual machine being arranged to execute the reduced set of virtual machine instructions that provide substantially all of the functionality provided by the defined virtual machine instruction set, and wherein every one of the instructions in the defined set of executable instructions can be represented by at least one of the virtual machine instructions in the reduced virtual machine instruction set, and wherein the reduced set of virtual machine instructions consists of a number of virtual machine instructions which is less than the number executable virtual machine instructions in the defined virtual machine instruction set;

translating, at load time, said two or more different virtual machine instructions in said first sequence into said first-reduced instruction from said reduced set of virtual machine instructions;

generating, after said translating, a second sequence of bytecodes that includes said first-reduced instruction, thereby representing said first sequence of bytecodes with [[a]] said second sequence which includes at least one instruction from said reduced set of virtual machine instruction that replaces said two or more different virtual machine instructions in said first sequence;

determining, at load time, whether said second sequence of bytcodes includes a Getfield instruction immediately followed by an Astore instruction, wherein said Getfield

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and Astore instructions are selected from said reduced set of virtual machine instructions;

    generating, at load time, a macro instruction that represents said Getfield instruction and said Astore instruction that immediately follows said Getfield Instruction;

    loading in said virtual machine prior to execution time, said macro instruction instead of said Getfield instruction and said Astore instruction; [[and]]

    executing said macro instruction to store a value into a local variable; and wherein said virtual machine internally represents instructions as a pair of streams.

22. (Previously Presented) A computer system as recited in claim 21, wherein said macro instruction is generated during a bytecode verification phase.

23. (Cancelled)

24. (Currently Amended) A computer system as recited in claim [[23]] 21,

    wherein said pair of streams includes a code stream and a data stream,

    wherein said code stream is suitable for containing a code portion of said macro instruction, and

    wherein said data stream is suitable for containing a data portion.

25. (Previously Presented) A computer system as recited in claim 21, wherein said macro instruction is generated only when said virtual machine determines that said macro instruction should be generated.

26. (Previously Presented) A computer system as recited in claim 25, wherein said determination of whether said macro instruction should be generated is made based on a predetermined criteria.

27. (Currently Amended) A computer system as recited in claim 26, wherein said predetermined criteria is whether an said Getfield instruction is immediately followed by an said Astore instruction more than a predetermined number of times.

28. (Currently Amended) A computer readable medium including computer program code for storing values into local variables used by a virtual machine, comprising:

computer program code for receiving a first sequence of bytecodes to be executed by said virtual machine;

computer program code for selecting, at load time, a first-reduced instruction from a reduced set of virtual machine instructions, wherein said first-reduced instruction represents two or more different virtual machine instructions in said first sequence[[s]] of virtual machine instructions, wherein the virtual machine is compatible with a defined virtual machine specification that includes a defined set of executable virtual machine instructions that must be implemented to conform with the virtual machine specification, the virtual machine being arranged to execute the reduced set of virtual machine instructions that provide substantially all of the functionality provided by the defined virtual machine instruction set, and wherein every one of the instructions in the defined set of executable instructions can be represented by at least one of the virtual machine instructions in the reduced virtual machine instruction set, and wherein the reduced set of virtual machine instructions consists of a number of virtual machine instructions which is less than the number executable virtual machine instructions in the defined virtual machine instruction set;

computer program code for translating, at load time, said two or more different virtual machine instructions in said first sequence into said first-reduced instruction from said reduced set of virtual machine instructions;

computer program code for generating, after said translating, a second sequence of bytecodes that includes said first-reduced instruction, thereby representing said first sequence of bytecodes with [[a]] said second sequence which includes at least one instruction from said reduced set of virtual machine instruction that replaces said two or more different virtual machine instructions in said first sequence;

computer program code for determining, at load time, whether said second sequence of bytcodes includes a Getfield instruction immediately followed by an Astore instruction, wherein said Getfield and Astore instructions are selected from said reduced set of virtual machine instructions;

computer program code for generating, at load time, a macro instruction that represents said Getfield instruction and said Astore instruction that immediately follows said Getfield instruction;

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computer program code for loading in said virtual machine prior to execution time, said macro instruction instead of said Getfield instruction and said Astore instruction; [[and]]

computer program code for executing said macro instruction to store a value into said local variable; and

wherein said virtual machine internally represents instructions as a pair of streams.

29. (Previously Presented) A computer readable medium as recited in claim 28, wherein said macro instruction is generated during a bytecode verification phase.

30. (Cancelled)

31. (Currently Amended) A computer readable medium as recited in claim [[30]] 28,
        wherein said pair of streams includes a code stream and a data stream,
        wherein said code stream is suitable for containing a code portion of said macro instruction, and
        wherein said data stream is suitable for containing data.

32. (Previously Presented) A computer readable medium as recited in claim 31, wherein said macro instruction is generated only when said virtual machine determines that said macro instruction should be generated.

33. (Previously Presented) A computer readable medium as recited in claim 32, wherein said determination of whether said macro instruction should be generated is made based on a predetermined criteria.

34. (Currently Amended) A computer readable medium as recited in claim 33, wherein said predetermined criteria is whether [[a]] said Getfield instruction is immediately followed by an said Astore instruction more than a predetermined number of times.